



Complete Summary

TITLE

Heart failure in adults: percentage of adult heart failure patients who have ever had LVSD and met the following (for which they are eligible) at their last clinic visit: prescribed or were taking ACEI/ARB, prescribed or were on beta blocker therapy, non-smoker (primary care and outpatient cardiology).

SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of adult heart failure patients who have ever had left ventricular systolic dysfunction (LVSD) and met the following (for which they are eligible) at their last clinic visit: prescribed or were taking angiotensin-converting enzyme inhibitor/angiotensin receptor blocker (ACEI/ARB), prescribed or were on beta blocker therapy, non-smoker.

RATIONALE

The priority aim addressed by this measure is to optimize the pharmacologic treatment of patients with heart failure.

PRIMARY CLINICAL COMPONENT

Heart failure; left ventricular systolic dysfunction (LVSD); angiotensin-converting enzyme inhibitor (ACEI); angiotensin receptor blocker (ARB); beta-blocker; smoking status

DENOMINATOR DESCRIPTION

Number of adult heart failure patients who have ever had left ventricular systolic dysfunction (LVSD) and had a clinic visit during the month in question (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Number of adult heart failure patients who have ever had left ventricular systolic dysfunction (LVSD) and met the following at their last clinic visit:

1. Prescribed or were taking angiotensin-converting enzyme inhibitor/angiotensin receptor blocker (ACEI/ARB) within the last 12 months of the clinic visit or have contraindications to both
2. Prescribed or were on beta-blocker therapy within the last 12 months of the clinic visit or who have contraindications to taking beta blockers
3. Non-smoker

See the related "Numerator Inclusions/Exclusions" field in the Complete Summary.

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Heart failure in adults.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Group Clinical Practices

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Heart failure is a major health problem in the United States, and the incidence of the disease is projected to increase. It was the most frequent diagnosis of Medicare patients discharged from the hospital in 2001. There are an estimated 5 million individuals currently diagnosed with heart failure, 550,000 new cases diagnosed annually, and 1 million people hospitalized annually (including readmission rates of 30 to 60%).

EVIDENCE FOR INCIDENCE/PREVALENCE

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

There are over 260,000 annual deaths from heart failure. From 1979 to 2000 heart failure death rates have increased 148% and hospital discharges have increased 165%. The prognosis of patients with a new diagnosis of heart failure is poor. Senni et al. (1998) noted survival to be 86% at 3 months, 76% at one year, and only 35% at 5 years.

EVIDENCE FOR BURDEN OF ILLNESS

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

Senni M, Tribouilloy CM, Rodeheffer RJ, Jacobsen SJ, Evans JM, Bailey KR, Redfield MM. Congestive heart failure in the community: a study of all incident cases in Olmsted County, Minnesota, in 1991. *Circulation* 1998 Nov 24;98(21):2282-9. [PubMed](#)

UTILIZATION

See the "Incidence/Prevalence" field.

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Adult heart failure patients who have ever had left ventricular systolic dysfunction (LVSD) who had a clinic visit during the month in question.

The measurement period is monthly. Monthly data will be submitted quarterly.

The minimum sample size is 20 patients per month.

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Number of adult heart failure* patients who have ever had left ventricular systolic dysfunction (LVSD)** and had a clinic visit*** during the month in question

*International Classification of Diseases, Ninth Revision (ICD-9) codes: 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.40, 428.41, 428.42, 428.43, 428.9. (Refer to the table, "Descriptions of ICD-9 Codes," in the original measure documentation for code descriptions.)

**It must be documented that the patient has ever had LVSD (e.g., ejection fraction less than 40% during patient's medical history).

***The clinic visit is described as an office visit with a physician, nurse practitioner, or physician assistant. Education office visits may include a visit with a nurse.

Exclusions

Exclude visits for the purpose of testing or device checks only.

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Encounter

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Number of adult heart failure patients who have ever had left ventricular systolic dysfunction (LVSD) and met the following at their last clinic visit:

1. Prescribed or were taking angiotensin-converting enzyme inhibitor/angiotensin receptor blocker (ACEI/ARB) within the last 12 months of the clinic visit or have contraindications to both
2. Prescribed or were on beta-blocker therapy within the last 12 months of the clinic visit or who have contraindications to taking beta blockers
3. Non-smoker

Examples:

- A patient who has ever had LVSD, has contraindications to both ACEI/ARB, and meets the other two components of the measure would be included in the numerator.
- A patient who has ever had LVSD, has contraindications to both ACEI/ARB and to beta-blockers, and is a non-smoker would be included in the numerator.

Exclusions

Patients less than 18 years of age

Examples:

- A patient who has ever had LVSD who has contraindications to only an ACEI and is not on an ARB would NOT be included in the numerator.
- A patient who has ever had LVSD, was prescribed or taking ACEI/ARB and a beta-blocker, but is a smoker would NOT be included in the numerator.

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Encounter or point in time

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Percentage of adult heart failure patients who have ever had LVSD and met the following (for which they are eligible) at their last clinic visit: prescribed or were taking ACEI/ARB, prescribed or were on beta blocker therapy, non-smoker (primary care and outpatient cardiology).

MEASURE COLLECTION

[Heart Failure in Adults Measures](#)

DEVELOPER

Institute for Clinical Systems Improvement

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2006 Aug

REVISION DATE

2007 Aug

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2006 Aug. 116 p.

SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

MEASURE AVAILABILITY

The individual measure, "Percentage of adult heart failure patients who have ever had LVSD and met the following (for which they are eligible) at their last clinic visit: prescribed or were taking ACEI/ARB, prescribed or were on beta blocker therapy, non-smoker (primary care and outpatient cardiology)," is published in "Health Care Guideline: Heart Failure in Adults." This document is available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).

For more information, contact ICSI at, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; phone: 952-814-7060; fax: 952-858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

NQMC STATUS

This NQMC summary was completed by ECRI on November 29, 2006. This NQMC summary was updated by ECRI Institute on December 16, 2007.

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